

1/10

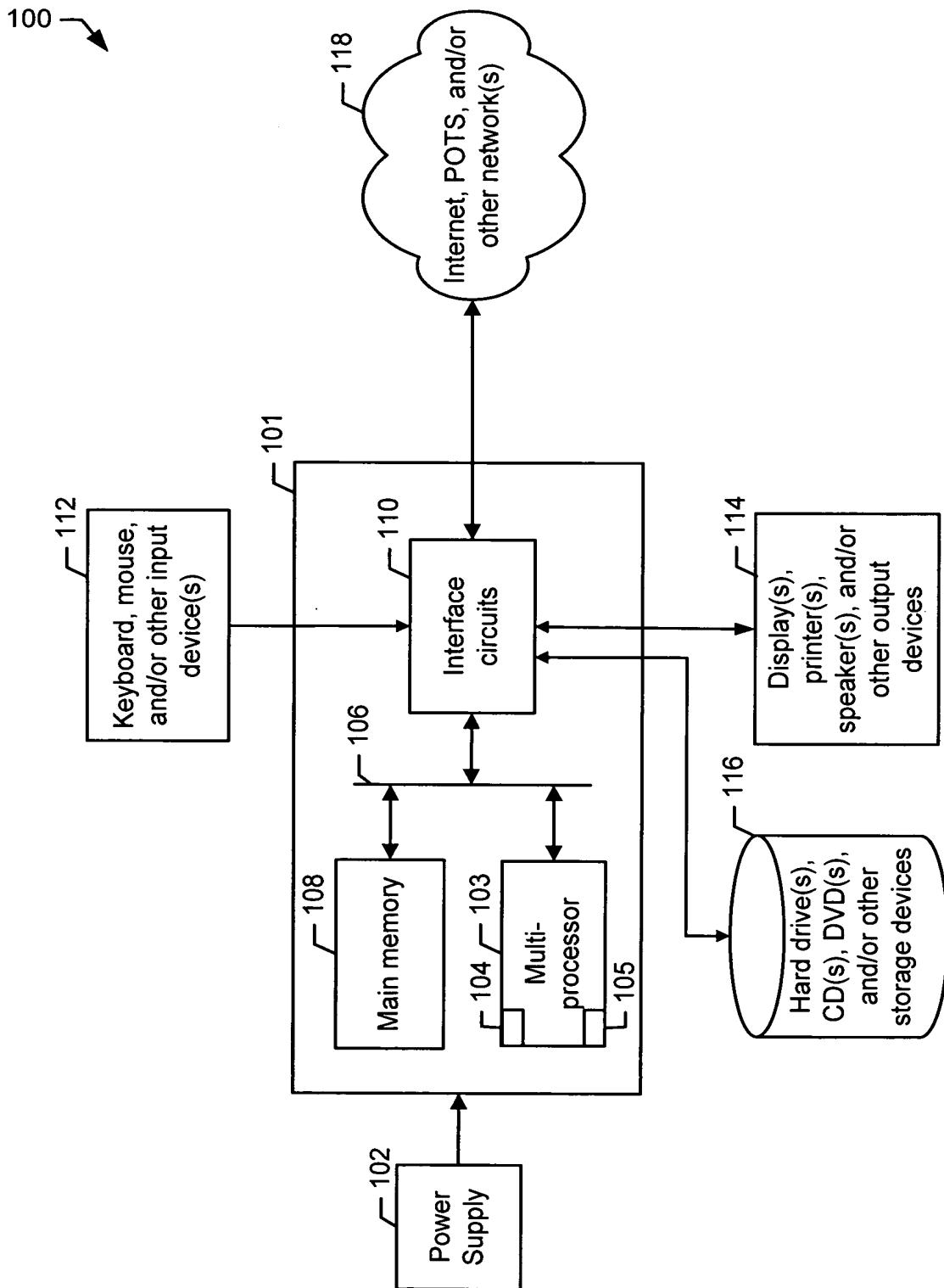


FIG. 1

2/10

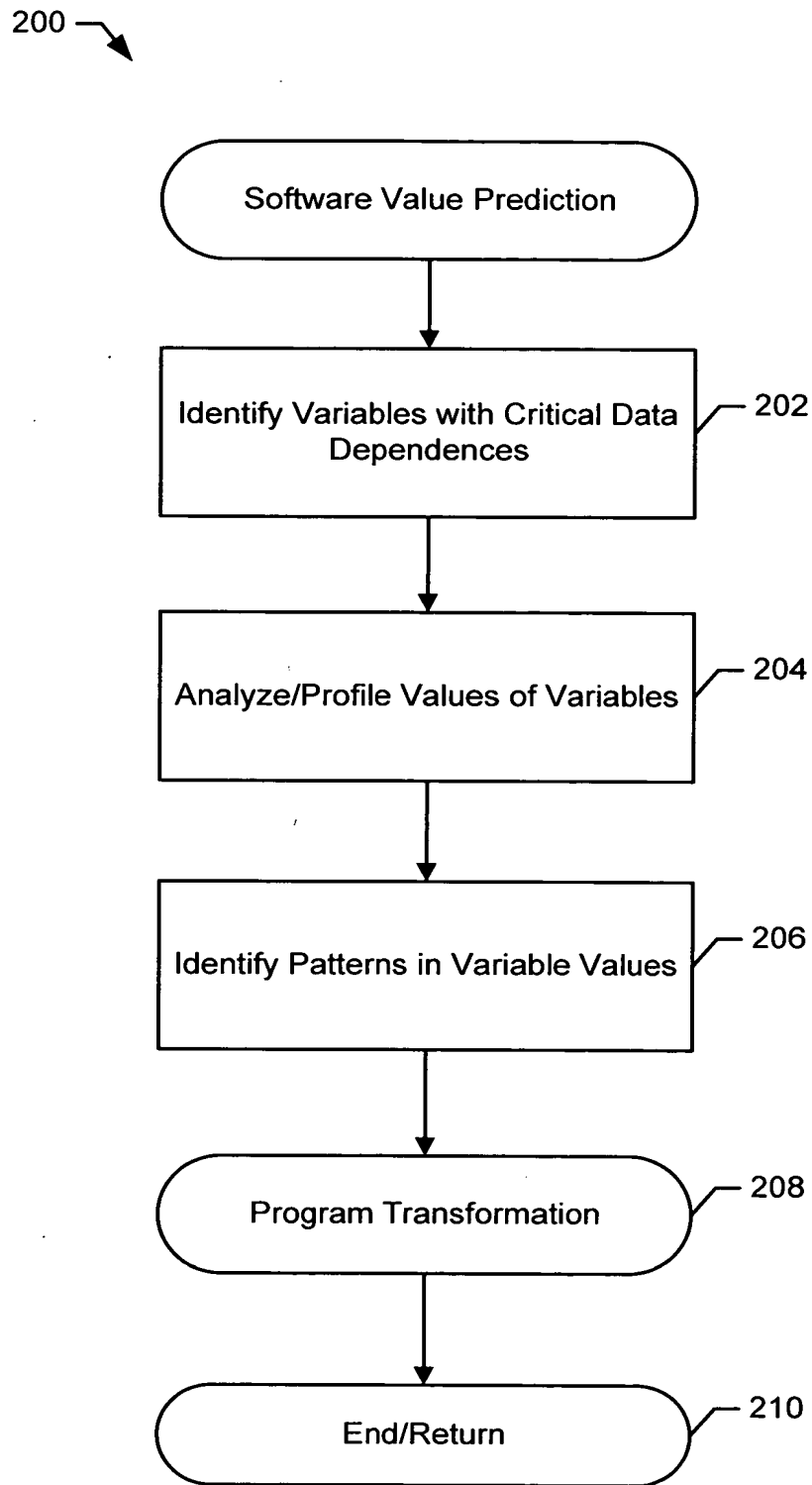


FIG. 2

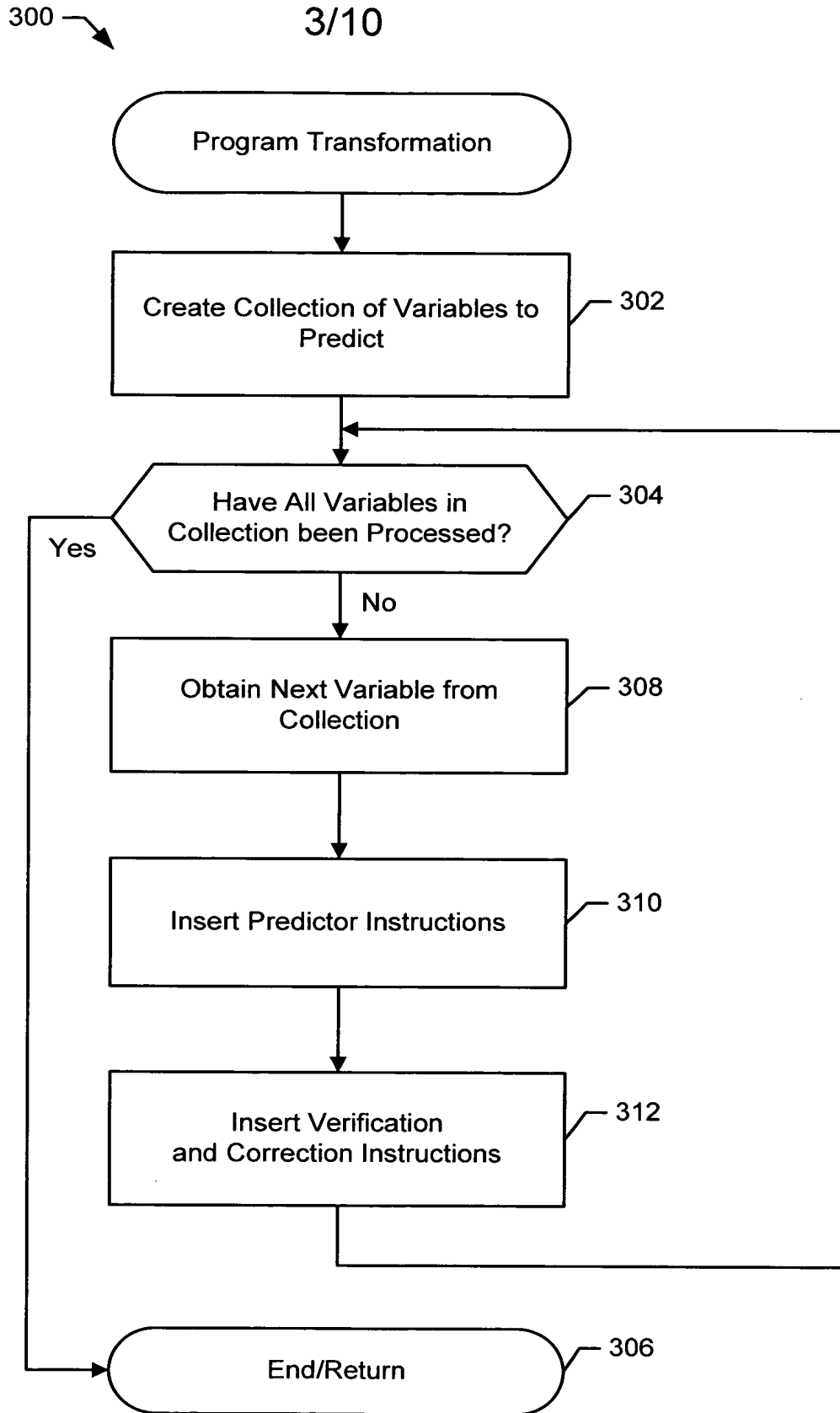


FIG. 3

4/10

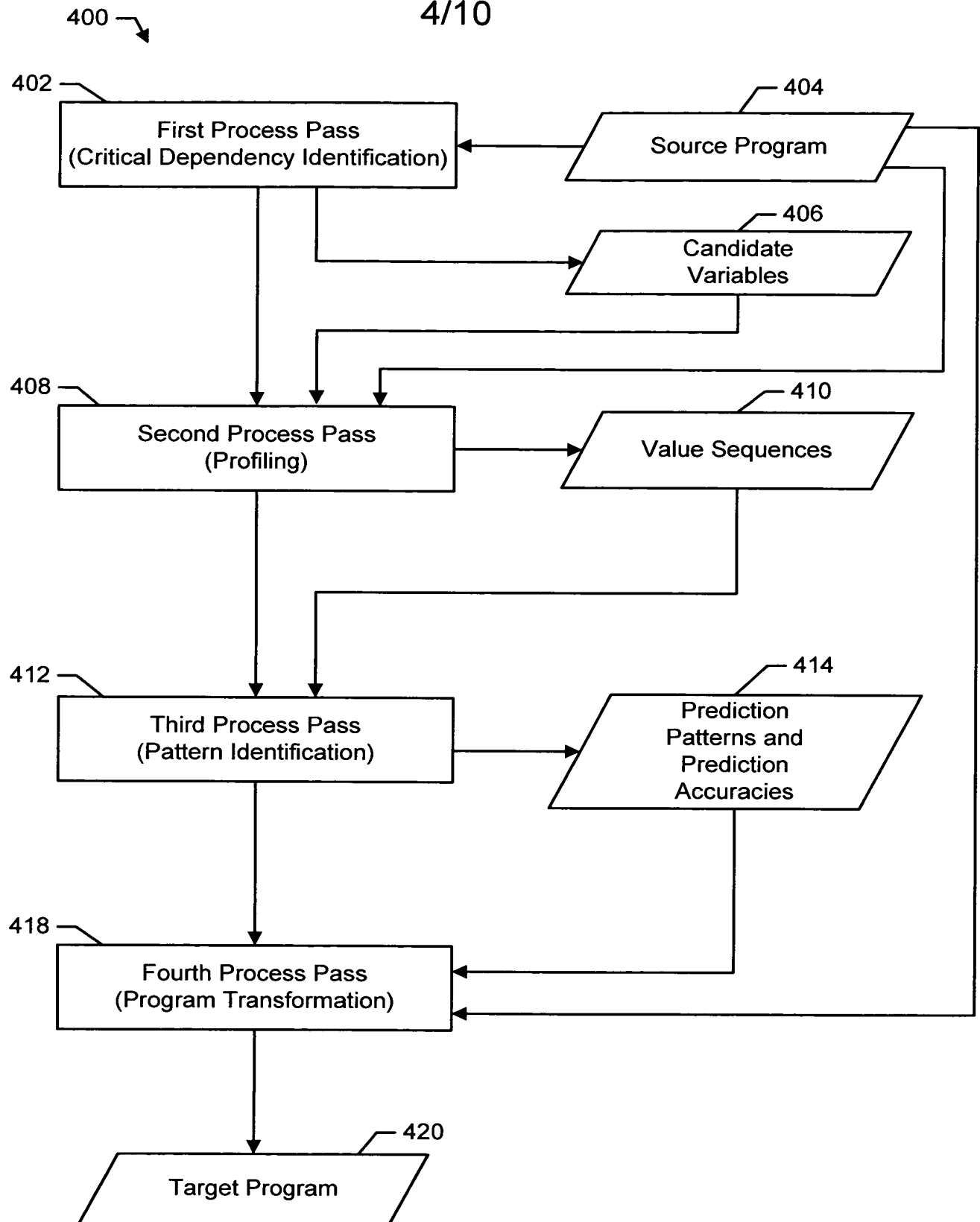



FIG. 4


5/10

500 

```
502:   foo( x );  
504:   S1;  
506:   x = bar();  
508:   S2;  
510:   S3;  
512:   tar( x );  
514:   S4;
```

FIG. 5


6/10

600 

```
602:   pred_x = pred( );
604:   speculative_tar( pred_x );
502:   foo( x );
504:   S1;
506:   x = bar();
508:   S2;
510:   S3;
606:   if( x != pred_x )
608:       recover_tar( x );
514:   S4;
```

FIG. 6


7/10

700 

```
702:    L:  S1;  
704:      fork( L );  
706:      S2;  
708:      foo( x );  
710:      S3;  
712:      x = bar( );  
714:      S4;  
716:      if (cont) goto L;
```

FIG. 7

8/10

800 

```
802:      pred_x = x;
804:  L:    x = pred_x;
806:      pred_x = pred( );
702:      S1;
704:      fork( L );
706:      S2;
708:      foo( x );
710:      S3;
712:      x = bar( );
714:      S4;
808:      if (x != pred_x)
810:          pred_x = x;
716:      if (cont) goto L;
```

FIG. 8

9/10

900 →

901: Main Thread:

902: L: S1;
904: fork(L);
906: S2;
910: foo(x);
914: S3;
918: x = bar();
922: S4;
926: if (cont) goto L;

903: Speculative Thread:

908: L: S1;
912: fork(L);
916: S2;
920: foo(x);
924: S3;
928: x = bar();
930: S4;
932: if (cont) goto L;

FIG. 9

10/10

1000 —▶

1001: Main Thread:

```
1002:    pred_x = x;
1004:    L:  x = pred_x;
1006:    pred_x = pred( );
1008:    S1;
1010:    fork( L );
1012:    S2;
1016:    foo( x );
1020:    S3;
1024:    x = bar( );
1028:    S4;
1032:    if (x != pred_x)
1036:        pred_x = x;
1040:    if (cont) goto L;
```

1009: Speculative Thread:

```
1014:    L:  x = pred_x;
1018:    pred_x = pred( );
1022:    S1;
1026:    fork( L );
1030:    S2;
1034:    foo( x );
1038:    S3;
1042:    x = bar( );
1044:    S4;
1046:    if (x != pred_x)
1048:        pred_x = x;
1050:    if (cont) goto L;
```

FIG. 10